IN THE CLAIMS

1. (Original) A method of constructing a preformed solder bar made-ready for installing a microchip, comprising:

forming a socket on a first surface of a microchip, such that the socket has predetermined physical dimensions complementary to those of a microchip connection pad footprint occupied by at least one contact pad area on the microchip,

the socket presenting a conductive base capable of bonding to solder;

bonding solder to the conductive base to place a solder bar in the socket and place the microchip in made-ready condition for installation.

2. (Original) The method of claim 1, wherein the microchip contains a silicon wafer and the step of forming the socket comprises

depositing an adhesion layer onto the wafer, and

depositing under-bump-metallization (UBM) material contacting the adhesion layer to complete formation of the conductive base.

3. (Original) The method of claim 2, wherein the step of depositing the adhesion layer includes depositing a conductor selected from the group consisting of aluminum, nickel-vanadium, titanium, tungsten and copper.

4. (Original) The method of claim 2, wherein the step of depositing the UMB material includes depositing a conductor selected from at least one of titanium, tungsten, vanadium, tin, copper, aluminum, gold, silver, and lead.

5. (Original) The method of claim 1, wherein the step of forming the socket includes the predetermined dimensions selected from the group consisting of rectangular, "E," "L," and "U" shapes.

6. (Original) The method of claim 1, wherein the step of forming the socket includes the physical dimensions selected from the group consisting of ring, square, and circular shapes.

7. (Original) The method of claim 1, wherein the step of forming the socket includes the physical dimensions being complimentary to the solder bar having a planar rectilinear configuration.

8. (Original) The method of claim 1, wherein the step of forming the socket includes the physical dimensions being complimentary to the solder bar having a planar curvilinear configuration.

9. (Original) The method of claim 1, wherein the step of forming the socket further comprising a step of forming a passivation layer on substantially all of the first surface, exclusive of an area where the socket is located.

10. (Original) The method of claim 9, wherein the step of forming the passivation layer includes the steps of:

applying one or more layers of passivation material to the entire first surface; and

removing selected portions of the passivation material covering the area where the socket is to be located.

11. (Original) The method of claim 10, wherein the step of applying one or more layers of passivation material includes applying at least one layer selected from the group consisting of polysilicon, silicon dioxide, and benzocyclobutane.

12. (Withdrawn) The method of claim 1, further comprises depositing a non-solder base metal in the socket after the step of forming the socket and prior to the step of bonding solder, such that the solder bar contains the non-solder base metal and the solder in respective layers.

13. (Withdrawn) The method of claim 12, wherein the step of depositing the non-solder base metal includes electroplating the non-solder base metal.

14. (Withdrawn) A method of claim 12, wherein the step of depositing the non-solder base metal includes screen printing at least one base metal layer.

15. (Withdrawn) The method of claim 14, wherein the step of depositing the non-solder base metal includes depositing the non-solder base metal layer selected from the group consisting of copper, gold, titanium, tungsten, and vanadium.

16. (Withdrawn) The method of claim 1, wherein the step of bonding solder includes electroplating one or more solder layers onto the conductive base.

17. (Withdrawn) The method of claim 1, wherein the step of bonding solder includes screen printing one or more solder layers onto the conductive base.

18 - 24. (Cancelled)